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(54) EXHAUST GAS PURIFYING METHOD AND PURIFYING DEVICE OF INTERNAL COMBUSTION ENGINE

(57) Abstract:

PROBLEM TO BE SOLVED: To provide an exhaust gas purifying method and device which can effectively remove a toxic component such as while suppressing the reduction of the fuel consumption, from the exhaust gas of a lean burn combustion internal combustion engine, and can make it harmless.

SOLUTION: This exhaust gas purifying method of an internal combustion engine is provided with a NOX purifying catalyst in an exhaust gas passage. The NOX purifying catalyst is a composition including at least one sort of element selected from an alkali metal, an

alkaline earth metal, and a rare earth metal; at least one sort of element selected from platinum group metals (so-called precious metals); and a titanium (Ti). It adsorbs the NOX in the exhaust gas on its surface when the exhaust gas is lean, and it reduces the adsorbed NOX to the when the exhaust gas is stoichiometric or rich. And when the internal combustion engine is in a lean operation, the NOX in the exhaust gas is adsorbed by the NOX purifying catalyst, the exhaust gas is made in the stoichiometric or rich condition for one second to 4.5 seconds after the adsorption, and the NOX adsorbed by the NOX purifying catalyst is reduced to N₂ by contact-reacting the NOX with a reducer to purify the exhaust gas.

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